



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1966

A NON-PROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED
TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

W6IFE Newsletter

President: **Doug Millar, K6JEY** 2791 Cedar Ave Long Beach, CA 90806 562-424-3737
doughhelen@moonlink.net

Vice President: **Dick Bremer, WB6DNX** 1664 Holly St. Brea, CA 92621 714-529-2800 rabremer@juno.com

Recording Sec: **Mel Swanberg, WA6JBD** 231 E Alessandro Blvd Riverside, CA 92508 909-369-6515
swanberg@pe.net

Corresponding Sec: **Kurt Geitner, K6RRA** 213 Main St. #5 Seal Beach, CA 90740 310-718-4910
k6rra@gte.net

Treasurer: **Dick Kolbly, K6HIJ** 26335 Community Barstow, CA 92311 760-253-2477
rkolbly@compuserve.com

Editor: **Bill Burns, WA6QYR** 247 Rebel Rd Ridgecrest, CA 93555 760-375-8566 bburns@ridgecrest.ca.us

Webmaster Chip Angle, N6CA

ARRL Interface Frank Kelly, WB6CWN 1111 Rancho Conejo Blvd. #501 Newbury Park, CA 91320
805-499-8047 fk@event1.com

FCC Interface Dave Laag, K6OW 11614 Indian St. Moreno Valley, CA 92557 909-924-1517

W6IFE License Trustee Ed Munn, W6OYJ 6255 Radcliffe Dr. San Diego, CA 92122 619-453-4563
edmunnn@compuserve.com

The **6 July 2000** meeting of the SBMS will be a presentation by several of us speaking on logistics of mountain topping. Lots of information on camping effectively, what and how you need to set up your stuff, and what the operating procedures are. There will be lots of opportunity for other members to add what they feel is important as well. If you are even vaguely thinking about operating portable, this is the meeting to come to. You should be able to access the assembled wisdom of hundreds of people-contest experiences. Even if you have been out many times, you may have something important to add or learn. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at <http://www.ham-radio.com/sbms/>.

Last meeting SBMS went to the operational site (Ontario, CA) of the Riverside and San Bernardino Catholic Church school and programming where Mike Collis, WA6SVT is the chief engineer and operator. His site sends TV programs over microwave links to Heaps Peak and on to the northern Mojave Desert areas, and to Box Springs Mtn and on to the lower Mojave Desert (Palm Springs area). Signal formats of ITFS and MMDS are used. His site has a mix of older and new technology for both analog and digital TV formats. Mike has ATV equipment on 1.2 GHz and 2.4 GHz. Mikes belongs to ATN which has a number of linked sites scattered through

out the southwestern states. Mike had some surplus hardware which was auctioned off to the benefit (\$61) of both SBMS and ATN. A work party was scheduled by Dick, WB6DNX for June 14 at Heaps Peak to clean up the operating site which SBMS is allowed to use during contests. SBMS will be helping Will, W0EOM for the October 2001 Microwave Update in Santa Clara. 18 people at the meeting.

: From the Prez- The Excitement Is Building Thanks to Mike Collins for a great time at his transmitter site. One of the added bonuses was an auction to benefit his club and ours. I'll see what can be done to have one each time we meet "out". Looks like the next out time might be Jan. How about going to "Homestyle" for our banquet next year? For the next two months I guess most of what most of us will be doing is planning for the 10 GHz and Up Contest. Get Ready Session at Costa Mesa- I get really excited thinking about roving, working remote and especially the get ready session. I strongly suggest we all go to the get ready session in Costa Mesa on the 29th. (More details further down the page) Even if you don't have a completed rig to test, bring it along. You will get good ideas of how other people have solved some of the same problems and get a chance to socialize not only with our members, but the folks from San Diego. Many thanks to Kerry K6IZW and others for bringing test gear along. At this stage of getting ready it is important to remember- if you get stuck and need help- ASK. There are plenty of people who can help get you and your rig going. There are also several groups going out to different locations. We need rigs and operators. So if you end up not quite ready or whatever, go along with a group and enjoy the contest anyway, just in a different role. I am trying to get together a set of future programs for after the contest on the higher microwave bands. Last week I visited W0EOM up in the Bay area. I made a video of his shop/lab and some of the equipment he has available for 24 and 47GHz narrowband. (yes there will be +inexpensive+ 24 and 47ghz transverters and synthesizers available) I also have some examples that I can show. I also hope to have examples and drawings for Narusawa's 47 and 75 GHz equipment as well. The September meeting should be on 24 GHz with several speakers, October on W0EOM and his 24-120 GHz gear, and November will be on Narusawa's centimeter gear. They should be exciting programs. For December. I am looking for someone to speak on 1296MHz EME. Good luck with your projects and enjoy. Doug

The following SBMS members were helping out at the Heaps Pk Work Party on June 14: Ken, WB6DTA; Larry, K6HLH; Chuck, WA6EXV; Gordon, WA6FMX; Ed, W6OYJ; Dick, WB6DNX ; and Gary, KE6JUV. The old tower was dropped down and cut into small sections and hauled away. The building got a new coat of paint. 73 Dick, WB6DNX

SBMS/ SDMS Costa Mesa Testing/ Picnic The 29 July SBMS and San Diego Microwave Group rig testing and picnic will be held at the Fairview Park near Costa Mesa (see enclosed map). Planned operation is from about 10 am until 2 pm. Kerry, N6IZW will again have his test gear that will get a measurement of your station radiated output (just point the your transmitter/ antenna/ dish at the device and you will get a reading of how much you are transmitting. Likewise Kerry's ERP/ MDS equipment can send you a signal so you can get an idea of how well your receiver is operating. Kerry has this equipment for 10 GHz (wideband and narrowband) and is finishing up equipment for 24 GHz (both wide band and narrowband. If your 24 GHz rig is very low power, you will need at least a 12 inch dish.

Mountaintopping Hints from Chip N6CAP practice before you go out-like in your driveway Do the set up and take down a couple of times and look for ways to eliminate confusion and ways to simplify set up. That way you won't forget something. Other things not to forget- toilet paper Think through your set up for ways that things can be easier.

Throw away any rusty clamps, screws or nuts. Buy new ones and put grease on them. Have something to wipe the dirt off when you drop stuff. Use spin tight's If you can, use stuff that can be finger tightened. Figure out how to be in the shade while you operate. Put stuff in quick get away boxes with a check list on the top that is waterproof. Color code cables and antenna elements so that you don't confuse them. Use square pegs or square masting so that alignment is correct on antennas. Your dish will blow over, so set it up so that it won't suffer too much damage. (hang water bottle or tool box from the under side of tripod.) Be prepared for wind. Don't leave dishes set up at night. Practice using your compass and GPS. Check current magnetic variation.

Scheduling-

29 July - A joint SBMS, San Diego Microwave Group rig field measurement party at Fairview Park near Costa Mesa. 10 am until 2 pm. See enclosed map.

3 August- Preliminary plan is for finalizing of 10 GHz contest positioning.

5-6 August UHF contest

19-20 August 10 GHz and Up contest first half

7 September 24 GHz talk

9-10 September VHF contest

16-17 September 10 GHz and Up contest second half

5 October W0EOM 24 to 120 GHz gear

2 November Nanusawa's gear

7 December 1296 EME

Wants and Gots for Sale

Want WR-42 90-degree twist and WR-42 waveguide switch Dave, WA6CGR 909-318-5154.

Want to purchase a 5760 MHz filter and dish feed, Ken WB6DTA 818-848-9059.

Wish for the loan of manual on counters Dana 351D and HP 5340a Dick, WB6DNX 714-529-2800.

For Sale 18 inch DSS dishes w/o mount hardware John KJ6HZ 714-761-0242.

Activity reported at the June 2000 SBMS meeting; Doug, K6JEY has a new scope, built an 2 GHz feed; Ken, WB6DTA went to Ron's house (K6WLC) for some experiments, did some 2.3 GHz ATV work and is still working on his 5 GHz rig; Bob, W6SYA also went to Ron's house, heard the Hawaii 144 and 432 beacons, and is getting his 10 GHz rig back on the air; Larry, K6HLH worked with WA6EXV over the air checking out his 2.3, 3.3 and 5 GHz pole mounted rigs; Dave, WA6CGR has a new portable 10 GHz rig and demo'd it by receiving the Santiago beacon; John, KJ6HZ is working on a wideband 10 GHz rig; Chuck, WA6EXV is building a narrowband 24 GHz rig out of Qualcomm parts and worked Larry on some lower microwave bands; Dick, WB6DNX is working on some Qualcomm board multipliers; Jeff, KN6VR went to Dayton; Dick, K6HIJ is working on a pole mount rig; Jim, K6ML is working on a new tower; Mel, WA6JBD salvaged some more equipment from a retired com site.

Ed, W6OYJ San Diego Microwave Group Report Kerry Banke, N6IZW reports that he has completed the ERP/MDS setup for 24 GHz wideband fm and narrowband cw/ssb. It and his 10 GHz ERP/MDS gear will be operating at the San Diego Microwave Group meeting on Monday June 19th, and the attendees are planning to bring their complete rigs to be tested at this meeting. If any problems turn up, this will give us time to correct them and be re-tested at the July 17th meeting at Kerry's QTH. This same setup of test equipment will be used at the July 29th Joint SMBS/ SDMG picnic. This is a test of the complete station including antenna. You will have your far field effective radiated power measured, and listen to an ever-decreasing cw carrier until you can barely discern it. Relative receiving performance will be recorded. On Saturday June 10th, Kerry, N6IZW, Pete W6DXJ, and Ed W6OYJ operated in the ARRL June VHF Contest from Point Loma, DM12JQ. Propagation was not very good. Signals from the Frazier (10368.310) and Santiago Peak (10368.010) beacons were copied but not very strong. Of course our local beacon on Mt San Miguel (10368.040), (DM12MQ) was strong. Equipment problems were rampant. W6DXJ's TWT power supply refused to go in the transmit mode, but his receiver was working. W6OYJ's TX was working but his receiver was very insensitive. W6OYJ worked W6TOI (DM04) and Tony KC6QHP and Jeff KF6PBP on Mt Soledad, about 10 miles away on 10 GHz ssb. N6IZW worked N6PI

(DM04) on 1296 ssb with 100 milliwatts and a 10 element "Cheap YAGI" per WA5VJB's design. Kerry also worked W6TOI (DM04) on 2304 using his 30-inch dish with 100 milliwatts. Attempts to hear XE2EED from DM10 on 1296 were unsuccessful. No liaison contact was made with other stations on Heaps Peak or elsewhere. An attempt between N6IZW and W6OYJ to make a 10-mile 2-way laser QSO on 11 June was unsuccessful due to excessive haze scattering of the optical signals. Both red lasers were visible at opposite sites as "twinkling points of light", due to the atmospheric scintillation effects. N6IZW heard bursts of audio from W6OYJ but Ed did not hear any from Kerry. The optical transceiver at W6OYJ was built by and belongs to Chuck, WB6IGP who was unable to be present. We are waiting for a clearer evening to try this again. 73s from Ed, W6OYJ

"TROPO TIME IS HERE" by Gordon West, WB6NOA

The early May hurricane in Baja opened up a brief 2-meter and 432 MHz reception of the Hawaiian beacon here in Southern California. On my return from the Dayton Hamvention, on Monday, May 22, the beacon could be heard weakly on 2 meters, and K6QXY heard the KH6HME beacon on 432 MHz.

Paul called to indicate there was an elevated noise coming from the mainland to stations near Hilo. Paul also indicates he now has a new cellular phone for all of us to coordinate with him when the band begins to open, and when he is up on the hill. He asks only use the cellular phone during active big band openings. The Paul Lieb cellular phone number is 808/345-4253.

Chip Margelli, K7JA, in cooperation with Yaesu, has sent to Paul a 2-meter FM transceiver which Paul has already pre-wired up at the beacon site. Paul will operate on 144.330 MHz, vertically polarized, after he has established SSB contacts during the next long tropo ducting event. Of course, he will work SSB first, but will then switch over to FM to offer a tropo experience to those only with FM base and mobile stations, vertically polarized. We are hoping that this will encourage more FMers to join us on SSB. We don't believe that the brief period that Paul will be on FM will significantly take away from his 2-meter SSB activities, and we all hope that this FM activity will increase awareness of how far the tropo ducting may extend, and more awareness of the weak signal SSB portion below FM operation at 144.330 MHz.

When the band opens up between Hawaii and the Pacific Coast mainland, I will get onto many of the repeaters and instruct anyone wishing to work FM to Hawaii to go to 144.330 MHz simplex. We will say NOTHING about the SSB frequency we are using so that no FMer would get mixed up and end up on the weak signal portion of the band. We will only mention on FM 144.330 MHz.

An interesting tropo prediction tool comes from William Hepburn's tropo forecast at <http://www.iprimus.ca/~hepburnw/tropo.html>. Thanks, Robert, N7STU, for this info, and the map predictions certainly look interesting--especially after this recent early May hurricane down south.

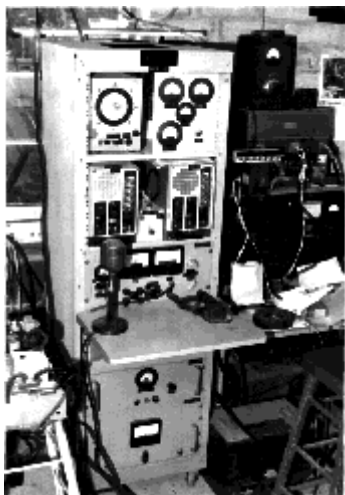
All WSWSS members are invited to the Fort Tuthill Hamfest on July 28-30. Fort Tuthill is located at the Flagstaff Airport Exit #337, 3 miles south of I-40 on I17. We have been invited to offer horizontal mobile antenna shootouts, seminars, talks, forums, and just about anything else we want that would fit into their 3day program. Many of us attended the get together last year, and we have quite a good opportunity for 3 days of fun, antenna shoot outs, and the opportunity to spread the work about all of the excitement down at the bottom of the bands.

Finally, phase 3D satellite is getting closer to launch; and when it goes up, expect big excitement on the VHF, UHF, and microwave bands. At the recent Dayton Hamvention, there were all sorts of new transverters popping up everywhere, and plenty of emphasis on VHF/UHF and microwave antenna designs. Here is just one more event that will add to the excitement of weak signal operation.

73 to you all. De WB6NOA

SWLing on the 683nm Band. by the Prez My wife and I just got a .7Å hydrogen alpha filter solar telescope. It is very portable and I will bring it along to the next meeting to let people observe the sun. Good views of

prominences and details on the disk of the sun. I think the best bet will be to set it up at the restaurant parking lot where we usually meet before the meeting. Prominences are easily visible as well as a number of kinds of surface features. If the sun is still up high enough, I'll set it up at the hall. Some good URL's for sun stuff are: A live picture of the sun in Ha. <http://www.sunspot.noao.edu/LIVE/> A local robotic telescope with live pictures in Ha. <http://sunmill.uml.edu/eyes/index.html> A good article on the physics, terms and chemistry of the sun <http://sunmill.uml.edu/eyes/halpha.html> Doug



Tommy, W6IFE rockloc rig back in the 1950's. Photo via George, K6MBL files

If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, bburns@ridgecrest.ca.us, or phone 760-375-8566. The newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.

San Bernardino Microwave Society newsletter

247 Rebel Road

Ridgecrest, CA 93555

USA

[back to SBMS homepage](#)